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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,584	11/18/2003	James A. Kweeder	H0004407 - 4690	6258
23639	7590	03/23/2006	EXAMINER	
BINGHAM, MCCUTCHEN LLP THREE EMBARCADERO CENTER 18 FLOOR SAN FRANCISCO, CA 94111-4067			SANDERS, KRIELLIION ANTIONETTE	
			ART UNIT	PAPER NUMBER
			1714	

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/716,584

Applicant(s)

KWEEDER, JAMES A.

Examiner

Kriellion A. Sanders

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 102

2. Claims 1-10 and 13-24 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by British Patent No. 2274109.

The British Patent discloses compositions that contain Nylon 6 or Nylon 6,6 and 1-5% of caprolactam. Fibers of the composition are formed by extrusion See page 2, paragraph 4 and page 3, paragraph 1.

Claims 1-11, 13-25 and 27 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Walde us Patent No. 5047459.

Walde discloses polyamide compositions comprising caprolactam at less than 5% by weight and the production step of extrusion. See col. 2, line 36 through col. 4, line 24.

Claims 1-4, 11, 13, 14, 15, 16, 22-25 and 27 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Mason et al, US Patent No. 4745143.

Mason et al discloses mixtures of caprolactam and hexamethylene adipamide. See col. 1, line 64 through col. 2, line 43, col. 3, lines 9-24 and col. 6, lines 64-67.

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Claims 1, 2, 4-14, 16-24, 27 and 28 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Shridharani et al, US Patent No. 5,223,196.

A discussion of the pertinent teachings of Shridharani et al is provided in the 35 USC 103 rejection below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-24, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over British Patent No. 2274109 as applied to claims 1-10 and 13-24 in view of Shridharani et al, US Patent No. 5,223,196.

The British patent equates nylon 6 and nylon 6, 6.

Shridharani et al discloses an improved process for melt-spinning a pigmented hexamethylene adipamide *fiber*. In one form of the invention two recurring amide-forming moieties are incorporated into the polyamide to be *spun* by polymerizing a blend of nylon 6,6-forming monomers, i.e. hexamethylene diamine and adipic acid or hexamethylene adipate salt, with 0.25 to 10 weight percent each, preferably 0.4 to 7.5 weight percent each, of two or more different difunctional polyamide-forming monomers to produce a random interpolyamide which is a terpolymer or a multi-polymer. For instance, Example 1 of the patent illustrates a terpolymer

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formed by the polymerization of nylon 6,6 forming monomers, *caprolactam*, and sodium 5-sulfoisophthalate.

The processes of the invention can be used to produce nylon fibers having different degrees of orientation and therefore different tensile properties.

Example 1 of the patent is a random terpolymer of nylon 6,6, 3 wt % polymerized units of *caprolactam*, and 2 wt % polymerized units of sodium 5-sulfoisophthalate made by blending ingredients in salt form and then polymerizing. These percentages of components meet the weight percent requirements of applicant's claims.

The fibers may be used to form carpets. Patentee explains that as the *fiber's* orientation increases, its tenacity, is increased. Depending on the tenacity and other *fiber* properties needed for a given end-use application, the desired degree of orientation is determined. The total mechanical draw necessary to achieve that level of orientation, and hence the desired *fiber* properties, is then set. The freshly-*spun fiber* is drawn by tensioning it typically between feed rolls and faster-turning draw rolls, the ratio between the two (draw ratio) being the measure of the draw and the degree of orientation being achieved. If the tension on the *fiber* is too high as it is being drawn at any given draw ratio, breaks occur and the process is disrupted. It is therefore desirable to reduce the draw tension necessary to achieve a predetermined draw ratio. Fibers to be used in textile and *carpet* applications, for example, require comparatively low tensile strength, and the freshly-*spun* fibers are typically drawn from as little as about 150% for textile yarns to about 250-300% to provide tensile properties (about 3 grams/denier tenacity and about 65% elongation) suitable for *carpet* fibers. Patentee further explains that for industrial

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applications however, higher tenacity fibers are desirable and consequently more orientation is needed.

See col. 2, lines 1-25, ccol.4, line 35 through col. 5, line 50. Also see col. 13, line 20 through col. 14, line 61.

Information Disclosure Statement

Park et al, Publication No. 2002/0099136 is cited on the 1449 and/or International Search Report.

Park et al provides technical information relating to nylon 6 compositions.

British Patent No. 1476997 provides technical information relating to compositions based on polycaprolactam and nylon 6,6.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122.

The examiner can normally be reached on Monday through Thursday 6:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kriellion A. Sanders
Primary Examiner
Art Unit 1714

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